Basic Facts about Soman (GD)

Background

- Soman (GD) was originally developed in Germany in 1944, as an insecticide.

- Soman (GD) is a nerve agent. A nerve agent is a compound that is designed to kill people by binding up a compound known as acetylcholinesterase (the body's off switch), this compound is essential for removing acetylcholine, the body's voluntary muscle and gland "on switch." With reduced or no acetylocholinesterase, the glands and voluntary muscles continue to be stimulated by the acetylcholine; eventually the muscles tire and can no longer sustain breathing functions.

- Soman is the most poisonous of the "G" agents. Antidotes are not effective a few minutes after the exposure. The agent binds irreversibly to acetylcholinesterase.

Risk

- Soman is lethal. It can enter the body by inhalation, ingestion, through the eyes, and to a lesser extent through the skin.

- Soman is persistent, when dispersed heavily, it can persist for one to two days under average weather conditions. It is thought to evaporate four times more slowly than water.

Symptoms

- Symptoms may appear in varying order based on route of exposure (the way it entered the body), but commonly noted symptoms include:

  Runny nose
  Watery eyes
  Drooling and excessive sweating
  Tightness of the chest
  Difficulty in breathing
  Dimness of vision (pupils may become pinpointed)
  Nausea
  Vomiting, cramps, and loss of bladder/bowel control
  Twitching, jerking, and staggering
  Headache, confusion, drowsiness, coma, and convulsions

Decontamination

- Skin: Remove contaminated clothing and wash skin with large amounts of soap and water or 5% liquid household bleach. Rinse well with water.

- If you believe that you have gotten Soman in your eyes, immediately flush your eyes with water for 10 - 15 minutes.

- If you believe that you have eaten or drank something with Soman on it or in it, do not induce vomiting.

Treatment

- If you believe that you have been exposed to Soman, you first should remove the agent from the skin and call 911. Ambulance teams and hospitals in many communities are stocking the antidotes.